

Publication

Approaches to wired terpyridine : Bithienyl alkynyl derivatives of 2,2':6'',2''-terpyridine and their ruthenium(II) complexes

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 43245**Author(s)** Constable, Edwin C.; Figgemeier, Egbert; Housecroft, Catherine E.; Medlycott, Elaine A.; Neuburger, Markus; Schaffner, Silvia; Reymann, Sebastien**Author(s) at UniBasel** [Constable, Edwin Charles](#) ; [Figgemeier, Egbert](#) ; [Housecroft, Catherine](#) ; [Neuburger, Markus](#) ;**Year** 2008**Title** Approaches to wired terpyridine : Bithienyl alkynyl derivatives of 2,2':6'',2''-terpyridine and their ruthenium(II) complexes**Journal** Polyhedron**Volume** 27**Number** 18**Pages / Article-Number** 3601-3606**Keywords** Alkyne, 2,2':6'',2''-Terpyridine, Heterocyclic, Coordination, Ruthenium, Thienyl

Two approaches to the formation of ruthenium(II) complexes containing ligands with conjugated 2,2':6'',2''-terpyridine (tpy), alkynyl and bithienyl units have been investigated. Bromination of 4'-(2',bithien-5'-yl)-2,2':6'',2''-terpyridine leads to 4'-(5-bromo-2',bithien-5'-yl)-2,2':6'',2''-terpyridine (1), the single crystal structure of which has been determined. The complexes [Ru(1)(2)][PF₆](2) and [Ru(tpy)(1)][PF₆](2) have been prepared and characterized. Sonogashira coupling of the bromo-substituent with (TIPS)C CH did not prove to be an efficient method of preparing the corresponding complexes with pendant alkynyl units. The reaction of 4'-ethynyl-2,2':6'',2''-terpyridine with 5-bromo-2,2'-bithiophene under Sonoashira conditions yielded ligand 2, and the heteroleptic ruthenium(II) complex [Ru(2)9 (tpy)][PF₆](2) has been prepared and characterized.

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